FALL WATER SUPPLY SUMMARY FOR NEVADA

Prepared by

U. S. DEPARTMENT of AGRICULTURE ★ SOIL CONSERVATION SERVICE

Collaborating with

NEVADA DEPARTMENT of CONSERVATION and NATURAL RESOURCES
DIVISION of WATER RESOURCES

Data included in this report were obtained by the agencies named above in cooperation with Federal, State and private organizations listed on the last page of this report.

AS OF
OCT. 1, 1973

TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season will interact with a resultant average effect on runoff. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1900 snow courses in Western United States and in the Columbia Basin in British Columbia. Networks of automatic snow water equivalent and related data sensing devices, along with radio telemetry are expanding and will provide a continuous record of snow water and other parameters at key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

PUBLISHED BY SOIL CONSERVATION SERVICE

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, Western Regional Technical Service Center, Room 209, 511 N. W. Broadway, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE	ADDRESS
Alaska	204 E. 5th. Ave., Room 217, Anchorage, Alaska 99501
Arizona	6029 Federal Building, Phoenix, Arizona 85025
Colorado (N. Mex.)	P. O. Box 17107, Denver, Colorado 80217
Idaho	Room 345, 304 N. 8th. St., Boise, Idaho 83702
Montana	P. O. Box 970, Bozeman, Montana 59715
Nevada	P. O. Box 4850, Reno Nevada 89505
Oregon	1218 S. W. Washington St., Portland, Oregon 97205
Utah	4012 Federal Bldg., 125 South State St., Salt Lake City, Utah 84111
Washington	360 U.S. Court House, Spokane, Washington 99201
Wyoming	P. O. Box 2440, Casper, Wyoming 82601

PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Water Supply Forecast and Snow Surveys Unit, California Department of Water Resources, P. O. Box 388, Sacramento, California 95802 --- and for British Columbia by the Department of Lands, Forests and Water Resources, Water Resources Service, Parliament Building, Victoria, British Columbia

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WATER SUPPLY OUTLOOK FOR NEVADA

and

FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

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WATER SUPPLY OUTLOOK FOR NEVADA

NEVADA'S 1973 SURFACE WATER SUPPLY WAS FAVORABLE TO IRRIGATORS FOR THE FIFTH CONSECUTIVE YEAR. MOST IRRIGATION INTERESTS SERVED BY ONE OF NEVADA'S MAJOR RIVER SYSTEMS RECEIVED NORMAL TO ABOVE NORMAL SUPPLIES.

SMALLER TRIBUTORY STREAMS ALSO PRODUCED GOOD SUPPLIES, ESPECIALLY DURING THE EARLY SUMMER.

RESERVOIR STORAGE IS ABOVE AVERAGE AT 125 PERCENT, WHICH IS SIMILAR TO LAST YEAR AT THIS TIME.

East slope of Sierra Nevada streams varied from near normal on the Truckee River (103 percent) to 118 percent on the Carson River. The East Walker River flowed 130 percent this past season.

Humboldt Basin streams produced excellent flows last season, with the Humboldt at Palisades flowing 163 percent of average.

Small streams in central and eastern Nevada produced excellent supplies this year. The deep snowpack on the Toiyabe range near Austin produced high water and some damage in the Central Nevada area early this summer.

Reservoir storage is very good, with major reservoirs containing 125 percent of the average storage at this date. This amount is only slightly below last year at this time. Larger reservoirs, namely Wild Horse, Rye Patch, Tahoe, Stampede, and Lahontan all contain excellent carryover storage and will provide water users some assurance of a good supply next season.

Fall soil moisture measurements indicate the surface soil mantle is very dry, reflecting the dry summer season. Fall streamflows and ground water levels remain near average, indicating the watersheds are in good condition with no large water deficits at this time.

The first water supply outlook report for the upcoming irrigation season will be issued on January 4, 1974. At that time snow survey measurements from key snow courses throughout the state will be available. These data should provide a good prediction of the 1974 water supply outlook.

Subsequent reports near the first of February, March, April, and May will further refine the outlook and will provide specific numerical forecasts of April - July 1974 streamflow.

APRIL - JULY 1973

NEVADA STREAMFLOW FORECASTS
AND
OBSERVED STREAMFLOW

The following table contains April-July forecasts made during the past winter. Observed streamflow quantities are provisional and were furnished by the U.S. Geological Survey.

	April-July Streamflow, Thousand acre-feet						
	Forecast				Observed	Average	Observed
FORECAST STREAMS	Feb. 1 1973	Mar. 1 1973	Apr. 1 1973	May 1 1973	1973	1953-67	1973 as % of 15 yr. avg.
Little Truckee above Boca, CA[1]		91	104	104	91	81	112
Truckee at Farad, CA[1]		289	310	310	268	258	104
Lake Tahoe[3]		1.72	1.70	1.70	1.29	1.39	93
E. Carson nr Gardnerville, NV		197	208	210	208	175	119
E. Carson nr Gardnerville, NV (Date of 200 c.f.s. flow)		7/22	7/28	7/28	7/20	7/23	-
W. Carson at Woodfords, CA		59	58	58	56	51	110
Carson nr Carson City, NV		185	204	206	196	166	118
Carson nr Ft. Churchill, NV		164	193	180	186	150	124
E. Walker nr Bridgeport, CA[2]		64	75	76	79	60	132
W. Walker below Little Walker nr Coleville, CA	148	150	168	170	168	143	117
Lamoille Creek nr Lamoille, NV		27	30	29	26	25	104
South Fork Humboldt nr Elko, NV		70	75	70	102	58	176
Marys River above Hot Springs, NV		30	30	28	29	28	104
N. Fork Humboldt at Devils Gate, NV		29	28	28	25	26	96
Humboldt at Palisade, NV	210	197	209	209	252	154	164
Humboldt at Comus, NV		155	158	158	218	110	198
Martin Creek nr Paradise, NV		16	15	15	14	14	100
Owyhee nr Gold Creek, NV[1]	22	19	21	20	26	16	163
Owyhee nr Owyhee, NV[1]	80	60	72	68	NA	60	NA

1 Corrected for storage above station.
2 April-August flow, corrected for storage.
3 Maximum rise in feet from April 1, assuming gates closed.

NA Not available

NEVADA

STATUS OF RESERVOIR STORAGE

October 1, 1973

Basin and Stream	Reservoir	Usable Capacity (1000 AF)	Usable Storage - 1000 acre-feet 1973	1972	1971	15 Year Average 1953-67
Owyhee	Wild Horse	72	49	54	55	12
Lower Humboldt	Rye Patch	179	116	152	161	58
Colorado	Mohave	1,810	1,412	1,404	1,422	1,413
Colorado	Mead	27,217	20,176	17,451	16,890	16,905
Tahoe	Tahoe	732	500	483	569	436
Truckee	Boca	41	4	28	32	10
Truckee	Prosser	29*	11	14	25	Storage began 1/30/63
Truckee	Stampede	220	195	116	150	Storage began 8/1/69
Carson	Lahontan	314	127	134	180	109
West Walker	Topaz	59	12	10	21	17
East Walker	Bridgeport	42	12	6	20	14

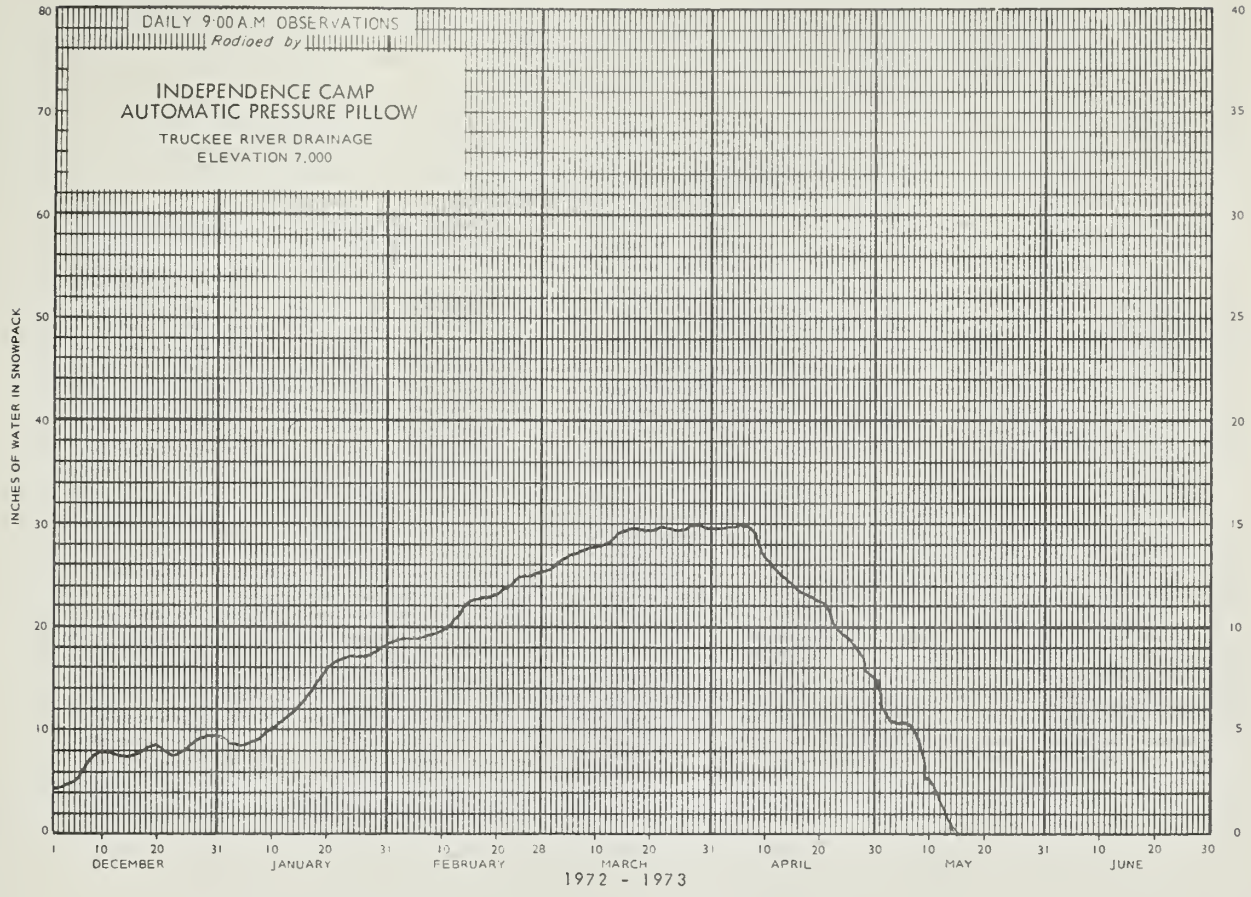
* Flood control use allocation of 20,000 acre-feet between November 1 and April 10.

SOIL MOISTURE

October 1, 1973

Station	Elevation	Profile Depth (inches)	Capacity	Date	Soil Moisture (inches) This Year	Last Year	2 Years Ago
EAST SLOPE SIERRA							
Independence Camp	7000	34	6.10	9/18	1.8	2.2	1.9
Marlette Lake	8000	50	3.70	Est.	1.1	1.1	1.6
Sonora Pass	8800	48	8.30	9/27	1.3	2.8	3.1
Virginia Lake	9200	40	5.00	9/27	1.7	1.9	1.7
HUMBOLDT BASIN							
Rodeo Flat	6800	42	11.00	9/27	4.9	4.9	5.1
OWYHEE BASIN							
Big Bend	6700	48	16.70	9/20	12.7	12.3	11.2
Taylor Canyon	6200	48	15.00	9/27	7.2	7.7	7.8
Jack Creek, Lower	6800	48	8.70	9/27	4.2	4.1	5.1

U.S.D.A. SOIL CONSERVATION SERVICE DAILY RADIO REPORTS BY AUTOMATIC SNOW MEASURING STATION



1972 - 1973

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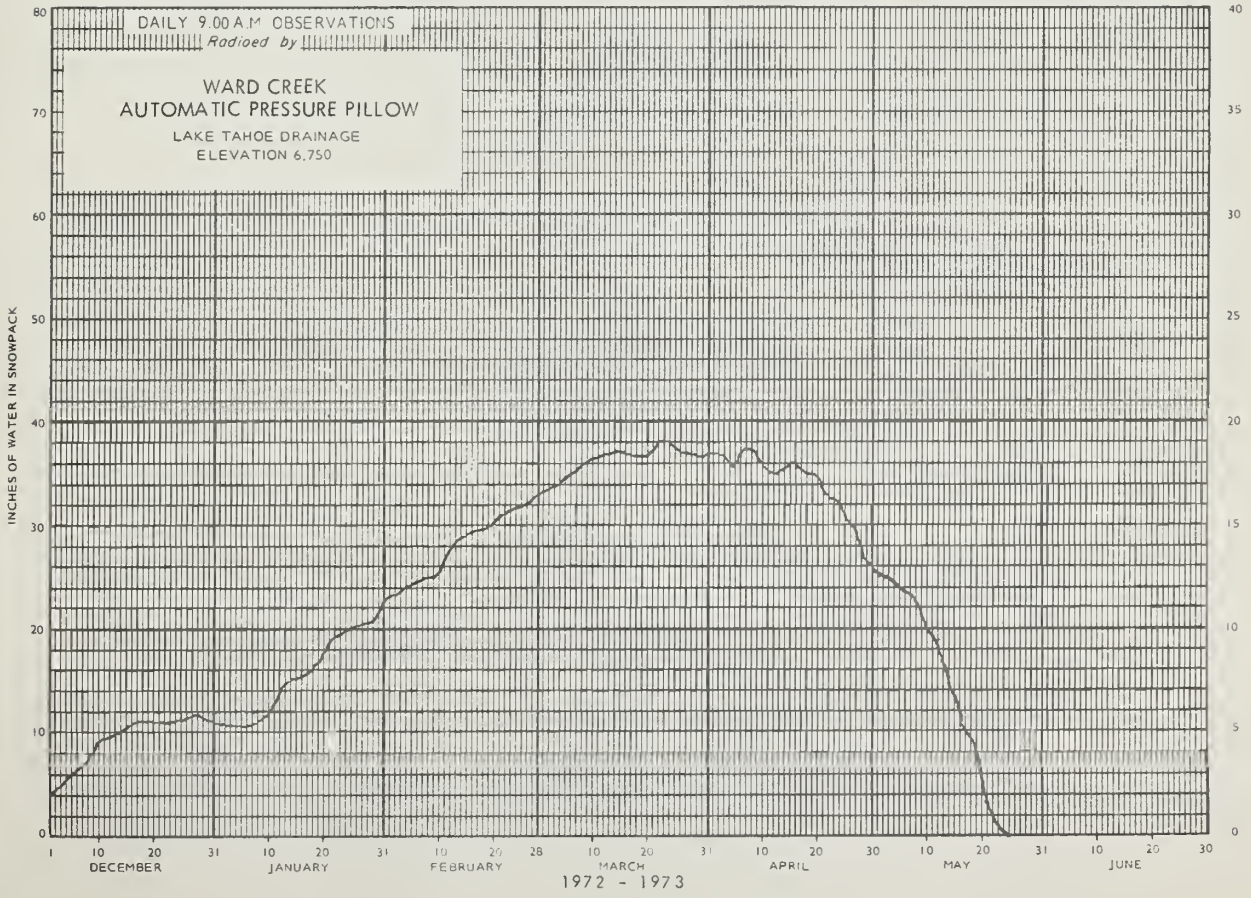

1972 - 1973

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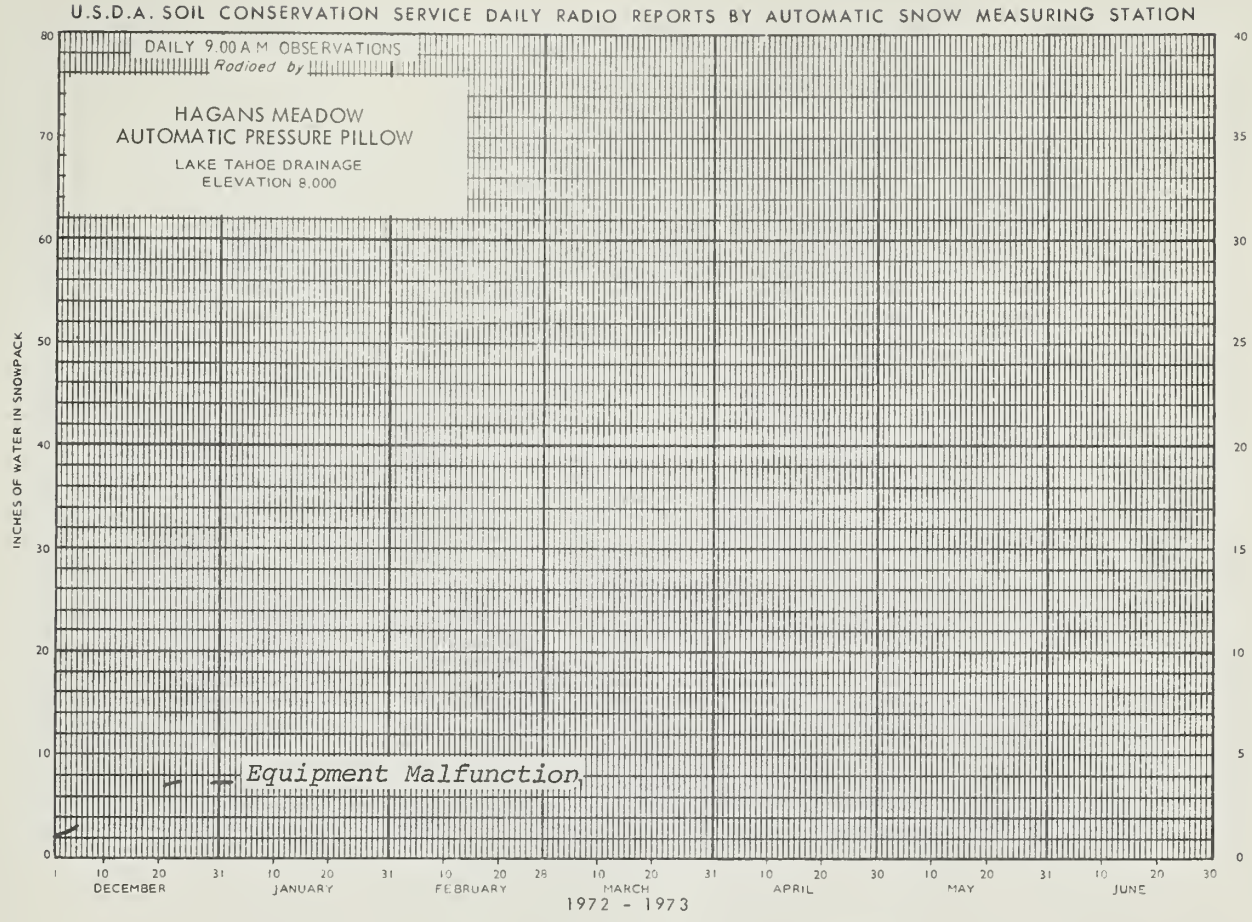

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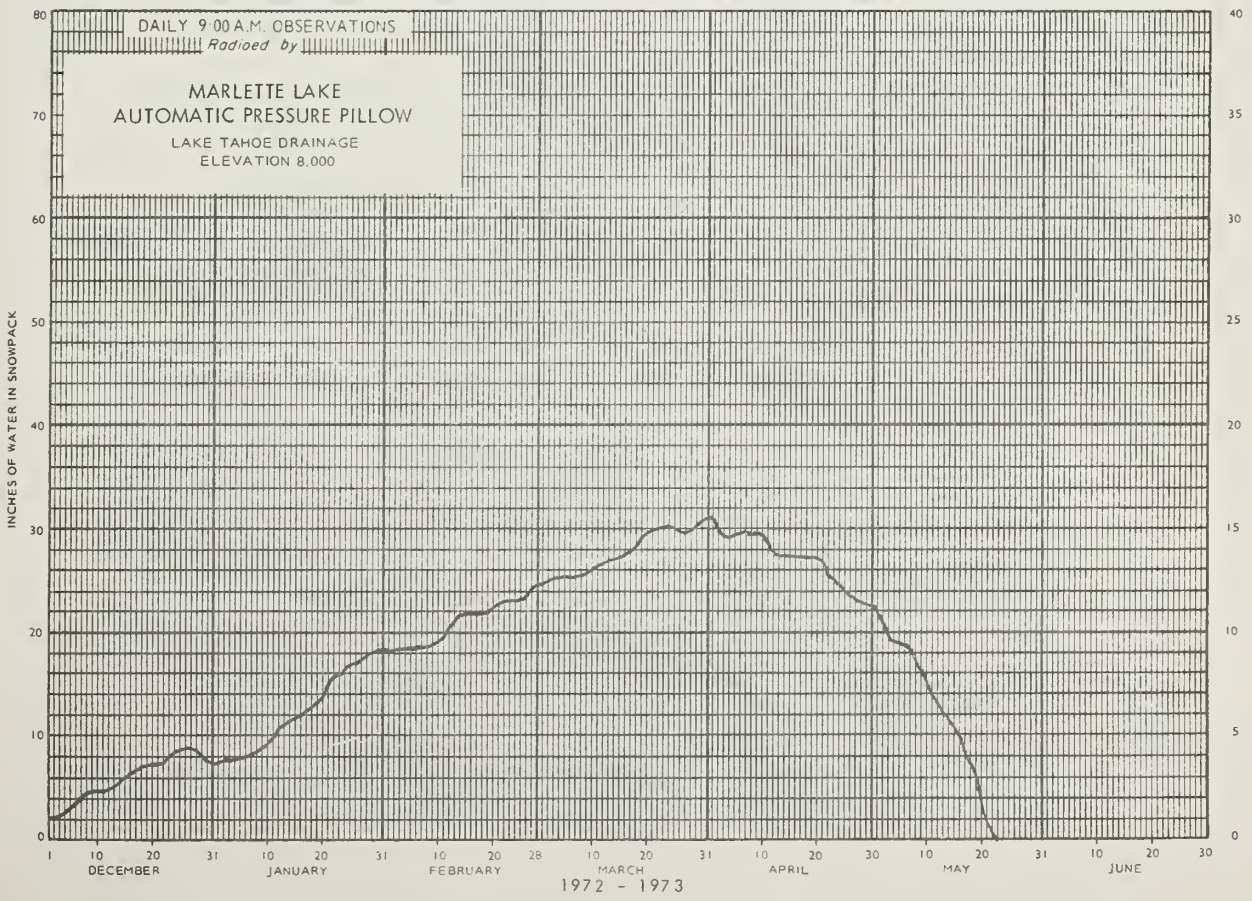

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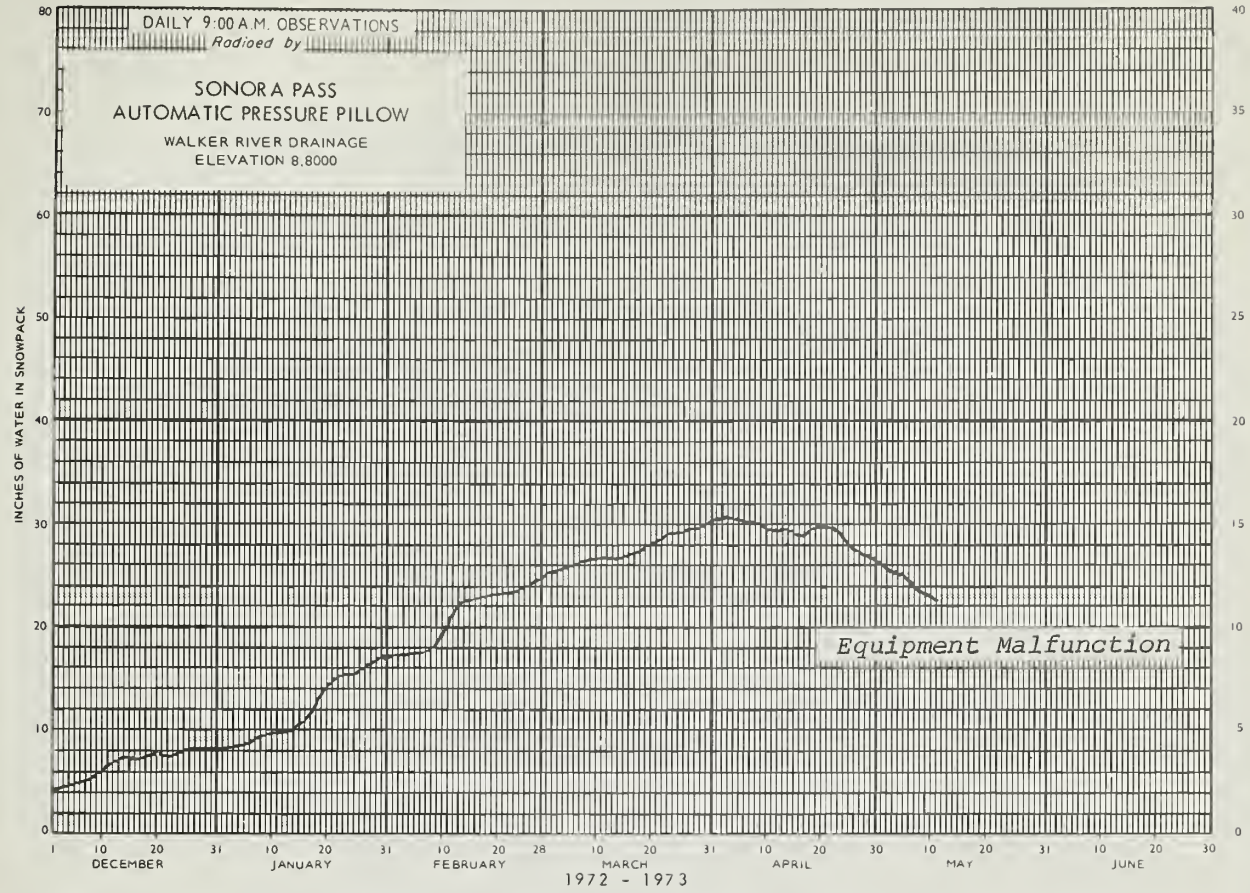

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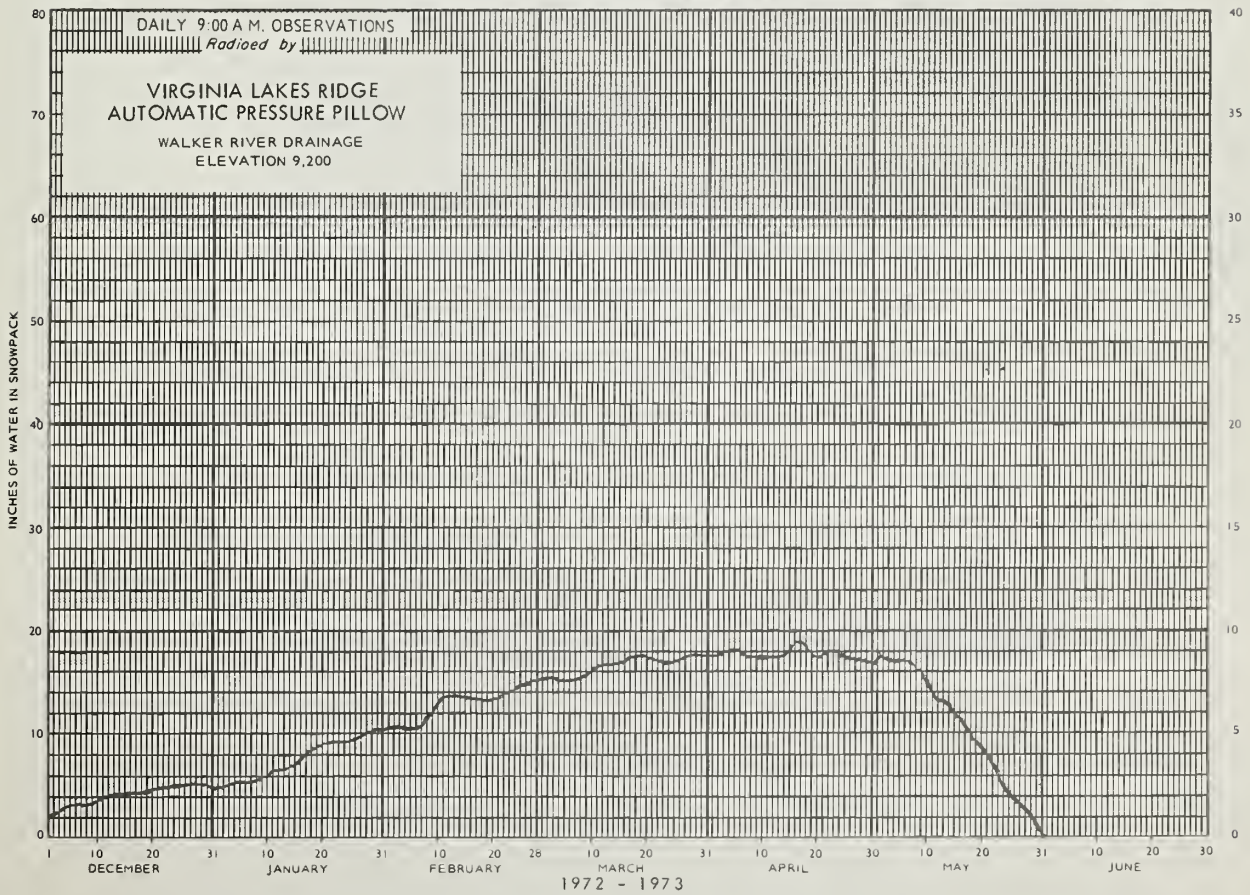

Agencies Cooperating in Collecting Data Contained in this Bulletin

FEDERAL
- Agriculturol Reseorch Service
- Bureou of Reclamotion
- Fish ond Wildlife Service
- Forest Service
- Geologicol Survey
- Novy
- Soil Conservotion Service
- U. S. District Court - Federal Woter Master
- NOAA, Notionol Weather Service

STATE
- Colifornio Cooperotive Snow Surveys
- Colifornia Deportment of Porks and Recreation
- California Deportment of Water Resources
- Colorodo River Commission of Nevoda
- Idoho Cooperative Snow Surveys
- Nevodo Associotion of Conservotion Districts
- Nevodo Deportment of Conservotion & Noturol Resources
  - Division of Woter Resources
  - Nevoda Stote Forester
- Oregon Cooperotive Snow Surveys
- Utoh Cooperotive Snow Surveys
- White Mountoin Research Stotion, Univ. of Colifornia

PRIVATE
- Amolgomoted Sugar Compony
- Kennecott Copper Corporotion
- Nevodo Irrigotion District
- Owyhee Project North Boord of Control
- Owyhee Project South Boord of Control
- Pocific Gos and Electric Compony
- Pershing County Water Conservation District
- Sierro Pacific Power Company
- Truckee-Carson Irrigotion District
- Wolker River Irrigotion District
- Woshoe County Woter Conservoncy District

Other orgonizotions ond individuols furnish voluoble informotion for the snow survey reports. Their Cooperation is gratefully acknowledged.

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Furnishes the basic data necessary for forecasting water supply for irrigation, domestic and municipal water supply, hydro-electric power generation , navigation , mining and industry

"The Conservation of Water begins with the Snow Survey"